IN THE CLAIMS

Amend the claims as follows:

Claims 1-27 (canceled).

28. (new) An *in vitro* method of regulating the differentiation of hematopoietic cells comprising contacting said hematopoietic cells with a differentiation regulating amount of a composition comprising a polymer, said polymer comprising disaccharide units each comprised of an N-acetyl D-glucosamine structure molecule bonded by an O-glycoside β1,4 bond with a glucouronic acid structure molecule, such that differentiation of said hematopoietic cells are regulated.

29. (new) A method of treating a person suffering from at least one of leukaemia, aplasia and neutropenia, said method comprising administering to said person a hematopoietic cell stimulating amount of a composition comprising a polymer, said polymer comprising disaccharide units each comprised of a N-acetyl D-glucosamine structure molecule bonded by an O-glycoside β1,4 bond with a gluceuronic acid structure molecule, such that said hematopoietic cells are stimulated or induced to differentiate.

30. (new) The method of claim 28 wherein said hematopoietic cells are CD14 negative/CD15 negative cells.

31. (new) The method of claim 29 wherein said hematopoietic cells are CD14 negative/CD15 negative cells.

32. (new) The method of claim 28 wherein said hematopoietic cells are stimulated or induced to differentiate upon said contacting.

33. (new) The method of claim 30 wherein said hematopoietic cells are stimulated or induced to differentiate upon said contacting.

34. (new) The method of claim 28 wherein said polymer is a mimetic of hyaluronic acid.

35. (new) The method of claim 29 wherein said polymer is a mimetic of hyaluronic acid.

36. (new) The method of claim 30 wherein said polymer is a mimetic of hyaluronic acid.

37. (new) The method of claim 31 wherein said polymer is a mimetic of hyaluronic acid.

38. (new) The method of claim 28 wherein said composition further comprises an adjuvant involved in myeloid differentiation.

39. (new) The method of claim 29 wherein said composition further comprises an adjuvant involved in myeloid differentiation.

40. (new) The method of claim 38 wherein said adjuvant is an anti-CD44 antibody or CD44-binding antibody fragment.

41. (new) The method of claim 39 wherein said adjuvant is an anti-CD44 antibody or CD44-binding antibody fragment.

42. (new) The method of claim 28 wherein said regulating is accomplished in the absence of exogenous cytokine.

43. (new) The method of claim 29 wherein said regulating is accomplished in the absence of exogenous cytokine.

44. (new) The method of claim 28 wherein said polymer comprises at least 3 disaccharide units.

45. (new) The method of claim 29 wherein said polymer comprises at least 3 disaccharide units.

46. (new) The method of claim 29, further comprising administering to said person at least one inhibitor agent which binds ICAM1 and inhibits binding of ICAM1 to said polymer.

47. (new) The method of claim 28 wherein said hematopoietic cells are leukaemic cells.

48. (new) The method of claim 29 wherein said hematopoietic cells are leukaemic cells.

49. (new) The method of claim 47 wherein said cells are any one of AML1/2, AML3, AML4 and AML5 blasts.

50. (new) The method of claim 48 wherein said cells are any one of AML1/2, AML3, AML4 and AML5 blasts.

51. (new) A method of producing a medicinal product intended to induce or stimulate the differentiation of cells selected from the group consisting of leukaemic cells and CD14 negative/CD15 negative stem cells, said method comprising admixing in said medicinal product a polymer comprising an effective quantity of disaccharide units each composed of an N-acetyl-D-glucosamine structure molecule bonded by an O-

glycoside β1, 4 bond with a glucuronic acid structure molecule, and anti-ICAM1 monoclonal antibody or an ICAM1 binding fragment thereof.

52. (new) A medicinal product intended to induce or stimulate the differentiation of cells selected from the group consisting of leukaemic cells and CD14 negative/CD15 negative stem cells, said product comprising a polymer comprising an effective quantity of disaccharide units each composed of an N-acetyl-D-glucosamine structure molecule bonded by an O-glycoside β1, 4 bond with a glucuronic acid structure molecule, and anti-ICAM1 monoclonal antibody or an ICAM1 binding fragment thereof.

53. (new) A method of producing a medicinal product intended to induce or stimulate the differentiation of cells selected from the group consisting of leukaemic cells and CD14 negative/CD15 negative stem cells, said method comprising admixing in said medicinal product a polymer comprising an effective quantity of disaccharide units each composed of an N-acetyl-D-glucosamine structure molecule bonded by an O-glycoside β1, 4 bond with a glucuronic acid structure molecule, and an adjuvant involved in myeloid differentiation.

54. (new) The method of claim 53 wherein said adjuvant comprises an anti-CD44 antibody or a CD44-binding fragment thereof.

55. (new) A medicinal product intended to induce or stimulate the differentiation of cells selected from the group consisting of leukaemic cells and CD14 negative/CD15

negative stem cells, said medicinal product comprising a polymer comprising an effective quantity of disaccharide units each composed of an N-acetyl-D-glucosamine structure molecule bonded by an O-glycoside β1, 4 bond with a glucuronic acid structure molecule, and an adjuvant involved in myeloid differentiation.

56. (new) The medicinal product of claim 55 wherein said adjuvant comprises an anti-CD44 antibody or a CD44-binding fragment thereof.

57. (new) A method of claim 28 wherein said polymer is a hyaluronic acid polymer or a fragment thereof.

58. (new) A method of claim 29 wherein said polymer is a hyaluronic acid polymer or a fragment thereof.

59. (new) A method of claim 51 wherein said polymer is a hyaluronic acid polymer or a fragment thereof.

60. (new) A product of claim 52 wherein said polymer is a hyaluronic acid polymer or a fragment thereof.

61. (new) A method of claim 53 wherein said polymer is a hyaluronic acid polymer or a fragment thereof.

62. (new) A method of claim 54 wherein said polymer is a hyaluronic acid polymer or a fragment thereof.

63. (new) A product of claim 55 wherein said polymer is a hyaluronic acid polymer or a fragment thereof.

64. (new) A product of claim 56 wherein said polymer is a hyaluronic acid polymer or a fragment thereof.

65. (new) A method for predicting the therapeutic benefit of a medicinal product intended to induce or stimulate the differentiation of cells selected from the group consisting of leukaemic cells and CD14 negative/CD15 negative stem cells, said method comprising placing in contact under physiological conditions leukaemic blasts from a patient and said medicinal product, determining whether said blasts differentiate *in vitro*, and predicting from said determination whether said product will be therapeutically beneficial to said patient.